



ORIGINAL RESEARCH PAPER

Obstetrics & Gynaecology

CERVICAL ENDOMETRIOSIS POST EMBRYO TRANSFER : MYTH OR REALITY

KEY WORDS:

Dr Amrita Pandey

Clinical Fellow, Delhi IVF And Research Centre, Delhi.

Dr Akansha Singh*

Clinical Fellow, Delhi IVF And Research Centre, Delhi. *Corresponding Author

Dr Aastha Gupta

Senior Consultant, Delhi IVF And Research Centre, Delhi.

Dr Anoop Gupta

Senior Consultant, Delhi IVF And Research Centre, Delhi.

ABSTRACT

Cervix is rare site of genital endometriosis, even lesser than extremely rare extra pelvic sites like an abdominal wall or thoracic and nasolacrimal sites. Paucity of literature may account for limited awareness of this condition. We present a case of 36 year old woman who developed pelvic pain and increased frequency of urine after 2nd cycle of failed embryo transfer in an assisted reproductive technique. Diagnosis of newly developed cervical endometriosis was established based on series of investigations. Patient had successful conception post hysteroscopic management of cervical endometriosis.

CASE PRESENTATION:

A 36 year old Euthopian lady visited Delhi IVF and Fertility Research Centre, Delhi with inability to conceive after 3 years postmarriage. Her menstrual history was normal. She was investigated for primary unexplained infertility including hysteroscopy, which failed to establish any etiology for her infertility.

After ovarian stimulation, adequate oocytes were retrieved and she underwent 2 cycles of failed Frozen Embryo Transfer (FET).

After 4 days of 2nd failed embryo transfer, she complained of severe pelvic pain and increased frequency of urine.

General physical examination was abnormal with per speculum : wound is healing (wound of first hysteroscopy), mild cervical erosion and minimal bleeding.

Blood and urine examination were normal with USG (abdomen = Pelvis) suggestive of a cystic lesion of around 3.7x2.27 cm² in endocervical canal.

MRI Pelvis suggestive of large lobulated mass lesions of 4x2.5 cm² seen in anterior lip of cervix bulging into endocervical canal showing hemorrhagic changes.

Patient underwent laparo-hysteroscopy considering the differential diagnosis of cervical endometriosis.

Laparoscopy Findings:-

1. Uterus with bilateral tube: normal
2. Bilateral ovaries normal
3. POD-clear
4. UB- normal
5. Liver surface—normal

Hysteroscopy:-

1. Bilateral ostia seen
2. Uterine cavity normal
3. Endocervix normal
4. **Endocervical Canal:** 4cm x 3cm likely endometriotic cyst noted and 200 ml of chocolate fluid drained, cystectomy done and cyst wall sent for histopathology study.

Findings Of Hpe Study:- section shows fibromuscular wall focally lined by columnar epithelium with endometrial stroma

and hemosiderine laden macrophage suggestive of endometriosis.

Subsequent to the surgical management, patient got relieved from intractable pelvic pain and after 2 months, FET was again attempted with successful conception.

DISCUSSION:

Endometriosis is defined as appearance of ectopic foci of endometrium commonly affecting women of reproductive age group and one of the leading cause of infertility¹. Endometriosis is most commonly noted in the pelvis with extra-pelvic locations like thoracic and nasolacrimal sites being rare^{2,3}. However, cases of the localization of haemorrhagic cystic lesions assuming a dark blue or chocolate brown appearance on the vaginal part of the cervix are quite rare. The presentation of cervical endometriosis is variable. It is usually asymptomatic but can also present as pelvic pain, metrorrhagia, post-coital bleeding or abnormal smears^{4,5}.

The formation of endometriotic lesions is usually associated with changes in hormonal background and immunological status, more often with the provocative effect of trauma, for example, during childbirth or surgery⁶. However, even in the absence of such a stimulus, endometrial cells, nevertheless, may have an increased migration potential associated with a change in the content of cytoskeletal proteins and the expression of their genes⁷.

To our knowledge, no cases have been described in young patients presenting with cervical endometriosis post embryo transfer.

Although infrequently observed, cervical endometriosis could potentially develop after an embryo transfer, particularly in a woman with pre-existing tendency towards endometriosis. The probable hypothesis for such occurrence may be due to high estrogen levels during IVF stimulation or cervical manipulation during hysteroscopy which might exacerbate existing lesions or trigger new lesions to develop in cervix; however, majority of available research shows no significant increase in new cervical endometriosis following IVF cycles⁸.

Origin of endometriosis can be explained by various theories. In patients with previous cervical trauma caused by the procedures such as LLETZ or curettage or biopsy, cervical

endometriosis can be explained by Sampson's menstrual reflex and implantation theory⁹. In the absence of any history of cervical trauma due to the aforementioned procedures, abnormal intrinsic properties of eutopic endometrium, embryonic remnants and metaplastic origination could be the probable explanation of development of cervical endometriosis in our patient¹⁰.

Treatment is rarely required in asymptomatic cases, however symptomatic cases can be treated with the LLETZ procedure, electrocoagulation, cryosurgery or CO2 laser vaporization¹¹. In our case, a diagnostic laparoscopy was performed to evaluate any possible extent of the disease in the peritoneum before proceeding with hysteroscopic drainage of the fluid from chocolate cyst with removal of cystic wall.

Summary:

In conclusion, this case highlights a rare case of development of cervical endometriosis after embryo transfer which may be due to cervical manipulation during hysteroscopy or due to high estrogen levels during IVF stimulation. Further studies may be necessitated to explore the authenticity of such probable reason as this rare disease could be the reason for conception failures post embryo transfer.

The limitation of the present study is due to its type - a clinical case report. A positive aspect of the study is timely diagnosis of rare cause of multiple failed embryo transfer and successful hysteroscopic management leading to conception in next cycle with frozen embryo transfer.

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